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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/741,100 | 12/21/2000 | John M. Mocenigo | 03493.00154 | 6688 |

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| EXAMINER |
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PEUGH, BRIAN R

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| ART UNIT | PAPER NUMBER |
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2187

DATE MAILED: 02/24/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/741,100

Applicant(s)

MOCENIGO, JOHN M.

Examiner

Brian R. Peugh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

This Office Action is in response to applicant's communication filed August 25, 2003 in response to PTO Office Action dated June 4, 2003. The applicant's remarks and amendment to the specification and/or claims were considered with the results that follow.

Claims 1-15 have been presented for examination in this application. In response to the last Office Action, claims 3, 4, and 8 have been amended.

Claim Objections

Claims 1 and 6 are objected to because of the following informalities:

Claims 1 and 6 recite "n-dimensional parameter space" in lines 8, respectively. The Examiner believes that "n-dimensional space", recited in lines 11 and 12, respectively, corresponds to the aforementioned "n-dimensional parameter space". The Applicant is encouraged to modify the claims in order to facilitate correct antecedent basis. The Examiner will interpret the claim language at this time according to this interpretation of the claimed subject language.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 4, 6, 8, 9, 11, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berliner (US# 5,806,085) in view of Bereznyi et al. (US# 6,449,695).

Regarding claims 1, 6, and 11, Berliner teaches a system and method for **file retrieval and caching** within a disk system. Berliner teaches that caching data from randomly selected files such as databases (col. 4, lines 22-25). A **data request** for data found on the CD-ROM drive is **checked first to see if said requested data is found within the cache**, where **the claimed parameter** could correspond to the block number of the request or request address (col. 5, lines 31-41). If a cache miss occurs for said request (**data not previously requested**), the data is loaded from the CD-ROM file system into the cache. The **n-dimensional parameter space** is interpreted as a cache, where a cache is notoriously well known to be highly configurable and contain at least one (n=1) row or column for data storage. A mini-database is used to identify data blocks within the cache which pertain to the file being cached, which is used to link the

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cache and CD-ROM file system (col. 6, lines 2-10). The mini-database **maps** any randomly accessed block of data within the cached file and disk file system (col. 4, lines 25-33).

Specifically regarding claim 11, a **processor** (1) is shown that is incorporated within a larger client-server arrangement (col. 3, line 59 – col. 4, line 3).

The difference between the claimed subject matter and that of Berliner is that the claims recite determining whether the data item had been requested during a predetermined amount of time. Bereznyi et al. teaches **checking if a data item has been requested within a predetermined amount of time**. Bereznyi et al. teaches that the data item may be loaded upon determining that the data item had not been requested within the predetermined amount of time (col. 10, line 63 – col. 11, line 22).

Therefore it would have been obvious to one of ordinary skill in the art having the teachings of Berliner and Bereznyi et al. before him at the time the invention was made to modify the caching system of Berliner to include the predetermined timing system of Bereznyi et al., because then a system for cache space conversation could be implemented for better cache performance, as taught by Bereznyi et al. (col. 11, lines 1-4).

Regarding claims 3, 8, and 13, Bereznyi et al. teaches a cache controller for checking the time for which a data item has been stored within the cache. **If the item has existed for a period of time greater than the time limit the data item is removed from the cache** (col. 11, line 60 – col. 12, line 3).

Regarding claims 4, 9, and 14, although Bereznyi et al. does not specifically recite a **channel for error messaging** to the requestor, an error message is returned to the requester when a specified data item is not located (col. 26, lines 31-33). Therefore, it would be inherent of the Bereznyi et al. system that the error message would be returned to the requester via a bus, or channel, as claimed.

Claims 2, 5, 7, 10, 12, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berliner (US# 5,806,085) and Bereznyi et al. (US# 6,449,695) as applied to claims 1, 3, 4, 6, 8, 9, 11, 13, and 14 above, and further in view of Singhal et al. (US# 6,148,300).

Berliner teaches that the mini-database can contain cache consistency information, such as time of last file update (col. 5, lines 55-63). The difference between the claimed subject matter and that of Berliner is that the claims recite that requestors are queued until an initial, or previous, request has concluded (claims 2, 7, and 12) and that if a previous request for the same data is currently being carried out, the current request is queued until the previous request has been completed (claims 5, 10, and 15). Singhal et al. teaches a data locking system. Singhal et al. teaches that if a memory location is not locked, the requestor can acquire the lock associated with the requested data. If the location is currently locked when **another (initial) request** for the data at the location is made, the second requestor may wait until the memory location, and data, becomes available (col. 6, lines 13-22). Also, **a queue is taught for holding**

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subsequent requestors of a current memory location's piece of data (col. 6, lines 32-47). Therefore it would have been obvious to one of ordinary skill in the art having the teachings of Berliner, Bereznyi et al., and Singhal et al. before him at the time the invention was made to modify the consistency scheme of Berliner and Bereznyi et al. to include the locking mechanism of Singhal et al., because then a system for further data consistency and coherency, leading to a greater chance of receiving the correct data upon request, could be achieved as taught by Singhal et al.

Response to Arguments

Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian R. Peugh whose telephone number is 703-306-5843. The examiner can normally be reached on Monday-Thursday from 7:00am to 4:30pm. The examiner can also be reached on alternate Friday's from 7:00am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks, can be reached on (703) 308-1756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

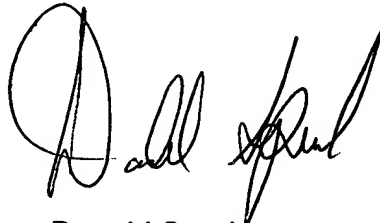
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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-9600.

DS/BRP



January 23, 2004



Donald Sparks
Supervisory Patent Examiner
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